MATH 382: COMPLEX ANALYSIS

SPRING 2017

Course Information:

- **Instructor**: Dr. Zhenghe Zhang, zzhang@rice.edu
- **Office**: Herman Brown 432
- **Class meeting**: 1:00PM–1:50PM, MWF, HBH 227
- **Office hour**: M4-5pm or by appointment
- **Text**: *Complex Analysis* (3rd Edition), by Lars V. Ahlfors.

TA recitations:

- Teaching Assitant: Vitalii Gerbuz
- TA office: HBH, Office 48 in the basement
- TA Office hours: Fridays, 4pm-5pm

Course Description:

This class is an introduction to the basic theory of complex analysis. We will begin with some basic facts regarding complex numbers and functions, in particular, analytic functions. Then, we will study comlex integration which is the central topic of this course. More concretely, we will cover the Cauchy integral theorem, residues, the evaluation of integrals by means of residues, and some basic facts about harmonic functions. We then will move on to Taylor and Laurent Series. Finally, we will study conformal mapping with the main focus on the Riemann Mapping Theorem.

Grades:

The grades will be based on a series of homework assignments (around 20%), a mid-term exam (around 40%), and a final exam (around 40%).

Exams:

There will be a mid-term exam and a final exam, both of which will be take-home. Both exams are pledged.

Homework:

Homework will be assigned via **Canvas** and be collected in class (mostly, at the beginning of Wednesday's class). You are encouraged to work together on homework. You must write and understand your own solution. **No late homework will be accepted – instead, the lowest homework grade will be dropped!**

Participation & Attendance:

Attendance is not required. However, I expect students to attend every class and arrive on time. It is your responsibility to keep informed of all the announcements and materials covered during class. While Canvas is an important resource, not all announcements will be posted there.

Disability Support:

If you have a documented disability that will affect your work in this class, please contact me within the first week to discuss accommodations. Students with disabilities will also need to contact disability support center.

Disclaimer:

The instructor reserves the right to make changes to this syllabus without prior notice. However, once changes are made you will be notified of those changes.